MODIS TECHNICAL TEAM MEETING

July 1, 1999

Bob Murphy chaired the MODIS Technical Team Meeting. Present were Barbara Conboy, Wayne Esaias, Bruce Guenther, Michael Hohner, Ed Masuoka, Mike Roberto, George Serafino, Dan Tarpley (NOAA), and Eric Vermote, with Deborah Howard taking the minutes.

1.0 SCHEDULE OF EVENTS

IGARSS '99 (Hamburg, Germany)	June 28–July 2, 1999
MODIS PI Processing Meeting Building 32, Room E103	July 13, 1999, 9:30 a.m. (Tuesday)
Semi-annual Reports Due (For January–June 1999)	July 15, 1999
SAFARI Program Implementation Meeting (Gabarone, Botswana)	July 26–30, 1999
Terra Launch Vandenberg Air Force Base	No earlier than August 27, 1999
AGU 1999 Fall Meeting (San Francisco, CA)	December 13–17, 1999
AGU 2000 Spring Meeting (Washington, DC)	May 30–June 3, 2000
IGARRS '00 (Honolulu, HI)	July 24–28, 2000
EOS-PM Launch	December 2000

Note: The PI Processing meeting is usually held on a Wednesday. Please note that the July meeting will be held on a Tuesday. Also, no PI Processing Meeting is scheduled for August. Meetings will resume in September.

2.0 MINUTES OF THE MEETING

2.1 Instrument Report

Guenther reported that the FM1 MODIS instrument performance during sensor thermal vacuum test has had some analomous behavior at cold plateau temperatures when operating in the currently designed manner. He presented a series of slides (Attachment 1) to the Technical Team. The first slide depicts PFM data; the others FM1 data.. The emissive infrared bands showed some data-sector to data-sector jumps, and slopes within the Earth-view data sector during a fixed pattern noise test. The five data-sectors are solar diffuser, SRCA, flight blackbody, space-view and earth-view. This test was run with the scan mirror fixed and pointing to a high quality blackbody source placed in the space-view port. The electronics operates during this test in such a way as to simulate the normal instrument data sector operations. The expected sensor response for this test is a constant signal output. Similar characteristics were present in the PFM sensor thermal vacuum testing, but the PFM behavior improved when it was operated at higher temperature levels.

The SBRS team was able to operate MODIS FM1 at the cold plateau this week without these performance anomalies by limiting the operating cycle of the heater on the flight blackbody and by using the Short-wave / Mid-wave focal plane heater, rather than the Long-wave heater, to maintain cold focal planes at a fixed temperature. The blackbody heater was limited to a maximum 30 percent duty cycle, exclusively heating only between the end of the earth-view sector and the beginning of the solar diffuser-sector. This duty cycle allowed for maintaining a temperature difference between the scan cavity and the blackbody of about 18K. The design of focal plane temperature control is identical when the Short-wave / Mid-wave heater is used compared to when the Long-wave heater is used.

SBRS will track these performance characteristics at other sensor thermal plateaus. If the performance improves, the current testing program will allow us to learn what the temperature is where these characteristics change. The detailed extent to which these characteristics were present in the PFM testing is being reviewed. We will report back later with recommendations on the extent that these changes in the FM1 operating conditions should be incorporated into the PFM operations design.

Roberto explained a new problem; an alignment shift in the track direction between the warm and cold focal planes was up to about 0.4 pixels. Initial study of the data indicates the shift was different from previous cool-down sequences. The Integration and Alignment Collimator (IAC) may be used near the end of this thermal vacuum test to better understand this problem.

There may also be a problem with the temperature control unit for the thermal vacuum chamber cooler for the Main Electronics Module (MEM) radiator. This may be causing MEM temperature variations. This is being studied by the

thermal engineers.

Roberto said that the thermal vacuum test schedule would likely be extended to 45 days.

2.2 SDST

Masuoka reviewed the Launch Ready PGE Status dated 7/1/99 (Attachment 2). A new ESDT is needed to accommodate PGE55, the ESDT is expected around mid-July. For PGE06 a software bug was found and fixed. Many Land products are now running in full production in MODAPS; Masuoka would like all of the 8-day Land products by July 9. He said that SDST is waiting for polar grid tile mapping for the Sea Ice – daily (PGE44). For Geolocation Control Points, the Land control points need redelivery and the Island control points delivery is due August 2—it is needed after launch. Masuoka said that they are ready to test the Atmosphere - weekly and monthly products. He reported that Moss-2 test was delayed and began today.

2.3 GDAAC

Serafino reviewed the GDAAC Notes for MODIS Technical Team Meeting dated 7/1/99 (Attachment 3). He reported that the DAAC is recovering from an external hack into the system. Production is fully recovered, however user access is slower to recover. Serafino reported that measures were taken to prevent a reoccurrence and recovery is going well; the ECS system is getting all new passwords.

Serafino said that another delivery of PGE03 that will include a GDAAS fix is planned for the upcoming week. Additionally, the decision to use version 2.2.0 versus 2.1.5 will rely somewhat on how it affects the higher level products. He said a formal MOSS-2 will be done on July 27-29.

2.4 PI Processing

Vermote said that he has requested MODLAND sample products to send to the DAACs. He reported that the X-day test is near completion, although there are some missing products. Also, the schedule has been reworked to run the Y-day test.

2.5 MODARCH

Michael Hohner, MODARCH System Administrator and Digital Librarian, presented some options on potential additional Web pages for the MODIS Web site. Hohner suggested that the Technical Team think of MODARCH as an information exchange forum. He is developing some sample pages that would be suitable for quick information exchange and/or could serve as “hot” newspages. Hohner said that such Web pages could be designed with an interactive database component that would allow for several options for

interfacing with the database and creating the resulting Web pages from the database. Murphy commented that MODIS needs a communications plan. He asked what kinds of topics would go into such pages and what kinds of things the MODIS teams want to publish on the Web.

Murphy asked members of the MODIS teams to take a fresh look at the MODIS Web site, see whether they think it serves its purpose, and make suggestions on how to update it. He asked them whether it should serve as a site to share data products, validation plans, data product descriptions, etc. Murphy suggested that they think about this in a "MODIS-centric" way and consider whether a system of Web pages with a database component like Hohner described should be linked to the current structure of Web pages on MODIS.

Esaias asked whether most of the users of MODIS data would get their information from the DAAC and said that a different point of contact may be appropriate for a team member versus a potential user. Hohner said that he wants to avoid duplication—some things are very detailed at the DAACs. He suggested that the MODIS site might provide a portal or link from MODIS to the relevant Web pages at each of the DAACs.

2.6 MAST

Conboy said she has received all inputs except the data flow chart for the EOS Data Products Handbook PM-1 Vol. 2 and has forwarded it to Murphy for his review. Murphy will submit final modifications to Conboy for editing. A very brief discussion followed about the numbering system for new products. One technical team member asked whether the numbering system was the same for EOS-AM, EOS-PM and products that were for both AM and PM. Masuoka commented that updating the data products handbook is an opportunity to standardize the numbering system.

3.0 ACTION ITEMS

3.1 Action Items Carried Forward

1. Discipline Leaders and Support Team Leaders: Inputs for the EOS Data Products Handbook PM-1 Vol. 2 are due to Barbara Conboy by May 24, 1999.

Status: This item remains open. Conboy has received all inputs except the data flow chart.

2. Murphy: Create a mechanism for coordinating MODIS operations and other schedules that includes an interactive listing. It should be more than a passive posting of schedules on the World Wide Web. Such an interactive schedule could be used by MODIS science discipline teams to coordinate field campaigns

or by the operations group to coordinate MODIS activities with the other Terra instruments' activities.

Status: This item remains open.

3. Hohner and Howard: Develop a weekly MODIS news page linked to the MODIS home Web site. It should include hot items and reflect weekly progress.

Status: This item remains open.

4. Murphy: Investigate the status of direct broadcast and present an update to the Technical Team.

Status: This item remains open.

5. Masuoka: Submit an EOS-PM Data Product Update to ESDIS.

Status: This action item remains open.

6. Masuoka: Examine status of DAO ancillary products for MODIS.

Status: This item remains open.

7. Barnes: Work with Wayne Esaias to complete the written and vugraph versions of the Oceans Validation Plan.

Status: This action item remains open. Esaias has submitted the narrative version of the Oceans Validation Plan to Michael King. The vugraph version is pending.

3.2 Closed Action Items

1. MODIS Community: Last call for Terra Launch; updates/additions due to Barbara Conboy by May 20, 1999.

Status: Conboy submitted MODIS' list to PAO . Since launch has been postponed, additional updates/additions are forwarded to PAO when received.

2. Murphy: Clarify the data release agreements between NASA and NOAA on MODIS data, including MODIS requirements and which of these requirements NOAA will accommodate. Discuss these items with Legg and Tarpley of NOAA.

Status: This item is closed. It was agreed to have MODIS representatives serve on the NESDIS data product review boards.

3. Murphy: Follow up on the status of the PI Processing working agreement with ESDIS.

Status: This item is closed as of March 11, 1999. The conveyance memo from SDDTs and Discipline Leaders was signed.